



# University of Hawaii at Manoa

**Environmental Center**  
Crawford 317 • 2550 Campus Road  
Honolulu, Hawaii 96822  
Telephone (808) 948-7361

Office of the Director

RL:0342A

## HB 617 RELATING TO REMOVAL OF SAND

Statement for  
House Committees on  
Ocean and Mineral Resources  
Water, Land Use Development and Hawaiian Homes  
Public Hearing, 1 March 1979

HB 617 is identical to SB 682. The Environmental Center has reviewed SB 682 in conjunction with SB 1037, a bill which would accomplish the same major purpose as HB 617 but is framed in a different language.

In the attached Environmental Center statement (RL:0342), we consider that neither HB 617 nor the alternative bill will do what is intended without some undesirable limitations or side effects. It would not be difficult to amend HB 617 to reduce or eliminate the undesirable aspects.



# University of Hawaii at Manoa

Environmental Center  
Crawford 317 • 2550 Campus Road  
Honolulu, Hawaii 96822  
Telephone (808) 948-7361

Office of the Director

RL:0342

## SB 682 & SB 1037 RELATING TO THE REMOVAL OF SAND

Statement for  
Senate Committees on  
Ecology, Environment and Recreation  
Economic Development  
Public Hearing, 28 February 1979

By  
Doak C. Cox, Environmental Center  
Ralph Moberly, Geology & Geophysics  
Frisbee Campbell, Institute of Geophysics  
Frans Gerritsen, Ocean Engineering

SB 682 and SB 1037 would amend HRS Section 205-33 which prohibits the removal of sand, coral, etc. from nearshore deposits on land and under water, with certain exceptions. The amendments proposed in both bills would delete the present exceptions, and make certain other changes. This statement on the bill does not reflect an institutional position of the University.

### Effects in common

Both of the present exceptions to the ban on commercial removal of sand, coral, etc. relate to sand mining. The first relates to operations begun in 1970 or earlier and the other a specific pilot sand mining project. The exception in the first case terminated in 1975, and the pilot project ended long ago. Hence both exceptions are now moot, and their deletion, as proposed in both SB 682 and SB 1037 is appropriate.

Neither the present version of HRS 205-33 nor the amendments proposed in either SB 682 nor SB 1037 would prohibit the removal of sand, coral, rocks, soil, or other beach compositions for "reasonable domestic non-commercial use."

The effects of the other change proposed in the two bills would be similar in general but different in detail. They are best discussed, first as they relate to commercial mining of sand, second as they relate to mining of the other materials covered, third as they relate to non-commercial removal of all of the materials covered, and fourth as they relate to agency permit requirements.

Commercial sand mining

HR 205-33 now prohibits onshore commercial sand mining in the shoreline setback area and prohibits offshore commercial sand mining except at a distance of 1000 feet or more or at a depth of 30 feet or more with the two exceptions noted above.

The reasons for the use of the depth and distance criterion should be recognized at least with respect to offshore mining of sand, the major concern is whether the sand is capable of being moved shoreward by nature so as to contribute to the nourishment of sand beaches. Within what is called a littoral cell, sand may be moved by waves and currents both along the shore and in the offshore-onshore direction. If sand is removed from offshore deposits within a littoral cell, it is not available for movement shoreward so as to contribute to the maintenance of beaches. Sand is continuously lost seaward from most littoral cells, and if it moves sufficiently far from shore, and particularly if it moves into water of sufficient depth, it can no longer be returned by nature to the beaches. Mining of sand from deposits beyond the seaward boundary of the littoral cell cannot ordinarily affect the beaches. The only exception would be if the mining resulted in a bottom slope steepening that extended shoreward into the littoral cell.

There are probably few places where significant shoreward movement of sand is possible under natural conditions at depths of 30 feet or more, regardless of the distance from shore. Significant shoreward movement of sand is probably more common a distance of 1000 feet from shore if the water is less than 30 feet deep at this distance. There are, however, some sand deposits that are both less than 1000 feet from shore and in water of less than 30 feet depth from which significant movement of sand to the beaches is very unlikely. The 30-foot depth criterion and 1000-foot distance criterion represent only approximately the criterion of major significance--the sand mining will not result in detrimental effects on the beaches.

SB 682 would retain the prohibition against commercial mining in the shoreline setback area onshore. It would also retain the present 1000 foot distance criterion and the present 30 foot depth criterion for determining where commercial mining is permissible offshore, but its application of these criteria is different from that in the present law. In the present law both criteria must be satisfied if the mining is permissible--in the proposed amendment only one need be satisfied.

In itself Section 205-33, if amended as proposed in SB 682, would allow commercial sand mining from some offshore deposits that may be significant in natural beach maintenance (but only if permitted by agencies with appropriate authority), and would prohibit sand mining from a few offshore sand deposits that are insignificant in natural beach maintenance.

SB 1037 would retain, not only the 30-foot depth criterion and the 1000-foot distance criterion with respect to offshore sand mining, but also the way in which the criteria are now used. It would, however, allows sand mining both onshore and offshore, without regard to the depth and distance criteria under certain circumstances that are considered in SB 682 to be non-commercial.

By itself, SB 1037 would not allow any commercial mining from any offshore deposits that would be significant in natural beach maintenance, but would continue prohibitions, somewhat more extensive than those that would result from SB 682, against commercial mining from offshore deposits that are insignificant in natural maintenance.

The effects of offshore sand mining on water quality and on the benthic biota may also be of concern. Among these, the turbidity and sedimentation effects that may result from the mining operation, are probably the most likely to be significant, particularly if the deposit contains much sediment of finer grain size than the sand itself. Where commercial offshore sand mining is permissible, any regulatory control that could be exercised on the basis of turbidity and sedimentation effects would have to be on the authority of laws other than Section 205-33.

The benthic population of sand deposits is sparse relative to populations on and in other types of marine bottom, and there are unlikely to be any endangered species in the sand-deposit populations. Hence effects on the biota in the sand seem to be of small importance.

SB 682 and SB 1037 do not differ significantly as they relate to turbidity, sedimentation and benthic biota effects.

#### Sand mining for public beach replenishment

Both SB 682 and SB 1037 would amend HRS 205-33 so as to allow the sand mining for the replenishment by the State or county of sand on public beaches. As indicated in the justification supplied by the Department of Transportation for HB 617, a companion bill to SB 682, the intent is to exempt sand mining for the indicated purpose from the general prohibition against sand mining. This intent would be met in different ways in the two bills.

In SB 682, the allowance is combined with the allowance for reasonable domestic takings, in a provision which permits "the mining or taking of sand, etc." "within the shoreline area and the territorial ocean." However, the specific allowance of mining activities for the state or county replenishment of sand on public beaches is then restricted to offshore sand deposits.

There is a possible problem with this provision in SB 682 in that it is not specifically phrased as an exception to the prohibition against commercial sand mining. Although the replenishment of sand on a public beach would be at the behest of the state or county the mining might be done by constructors and thus considered commercial and subject to the depth and distance limitations.

In SB 1037, the allowance is phrased as an exception to the prohibition against removal of sand, etc., and applies to onshore as well as offshore deposits. However, in that bill the allowance is unnecessarily limited to mining for replenishment a beach in the vicinity of the deposits to be mined.

#### Commercial coral taking

Other than the two exceptions relating to commercial sand mining in the present version of HRS 205-33, its provisions regarding the commercial removal of "coral, rocks, soil, or other beach compositions", and the changes proposed in SB 682 are identical to those relating to the commercial mining of sand. Of the non-sand materials covered,

coral is the most important. Insofar as the regulatory authority in HRS 205-33 is concerned, the major effect of the proposed amendment would be to allow commercial taking of coral closer than 1000 feet from shore if in water of more than 30 feet in depth, and in water of less than 30 feet in depth if more than 1000 feet from shore.

It may be pointed out that there are areas of relatively luxuriant coral growth within the space in which commercial taking is now prohibited by HRS 205-33 but would be allowed under the amendment proposed in SB 682. Most of the barrier reefs and the patch reefs of Kaneohe Bay, for example are within this space. Any restrictions on such taking in this space would have to be by authority other than that of Section 205-33.

SB 1037 would not make any change in HRS 205-33 as it relates to coral taking.

#### Permit and environmental requirements

The present version of HRS 205-33 does not itself provide any agency discretionary authority or refer to permits that may be required under other statutory authority.

The amendments proposed in both SB 622 and SB 1037 would make the sand mining for the replenishment of public beaches subject to the "written permission of all government agencies having jurisdiction thereof." In SB 682 there is no indication what environmental criteria should be supplied by the agencies in determining whether the permission should be granted. SB 1037 leans too far, however, in requiring that before permission can be granted it must be determined that there would be no negative environmental impact.

As we have pointed out earlier, sand mining may be expected to have some adverse impacts in the form of turbidity, sediment redistribution, and effects on the benthic biota. The condition that should appropriately be met is that the mining should be restricted to areas from which there is no significant natural movement of sand to any beach and in which the mining will result in any detrimental impact that is not offset by the benefit of the use of the sand mine.

The requirement of all pertinent agency permissions would be extended appropriately in SB 682 to commercial sand mining and to commercial taking of coral and rock, but the extension would not be provided in SB 1037.

The criterion for permission that is appropriate in the case of sand mining for public beach replenishment is appropriate also in the case of commercial sand mining, but would not be applied in either SB 682 or SB 1037.

#### Summary

The intent of both SB 682 and SB 1037 is appropriate. SB 682 would accomplish what is intended if the sand mining for replenishing public beaches is not considered commercial, and SB 1037 would if the requirement of an absolute determination of no negative environmental impact were relaxed. Permission of all pertinent agencies would be required by both bills in the case of sand mining for public beach replenishment but

only by SB 1037 in the case of commercial sand mining and coral taking. SB 682 is unduly restrictive in limiting the sand mining for public beach replenishment to deposits in the vicinity of the beaches.

The justification provided by the DOT for HB 617, to which we have referred above, relates in particular to a proposal for sand mining from a deposit in Kaneohe Bay for the restoration of the Kualoa Beach. We are aware of community objections to the project. However, in our opinion sand mining from the particular deposit intended to be mined will not have a detrimental effect on the beaches. In any case, the rationale for the bills is not restricted to that project, and that project will be subject to review before necessary permits are granted.

Either SB 682 or SB 1037 could easily be amended to accomplish the intent without undue limitations or relaxation of appropriate restrictions.

PROPOSED AMENDED VERSION OF  
HRS 205-33(a)

The mining or taking sand, coral, rocks, soil, or other beach or marine deposits is prohibited with the following exceptions:

- (1) Removal for reasonable, domestic, non-commercial uses;
- (2) Mining or taking more than 1000 feet seaward from the shoreline and in water of 30-foot depth or greater; governmental agencies having pertinent jurisdiction;
- (3) Mining or taking of sand for the replenishment of public beaches by the State or a county.

The written permission of all governmental agencies having pertinent jurisdiction shall be required for any mining or taking or for any mining of sand for public beach replenishment. Permission for sand mining for public beach replenishment shall be denied unless it can be reasonably demonstrated that sand does not move naturally from the area to be mined to any beach. Permission for any mining or taking shall be denied if it will result in significant environmental detriments not offset by public benefits.

Doak C. Cox  
February 1979